

manure, whereas the manure obtained from pigs is intermediate. One of the first things to be secured is **an even distribution** of the different kinds of manure, so that the bulk of manure may have a **similarity of character**. This is most necessary, if any measures are to be adopted for regulating the fermentation; **otherwise one portion is too hot**, and another portion is **not hot enough**, and that treatment which is favourable for one part is injurious for another. **An even distribution** is therefore **the first essential**; this being secured, the fermentation of the heap can be readily controlled.

52. For our present purposes, this fermentation may be familiarly described as a decay or rotting, brought on by the decomposing influence of the nitrogenous matter present, whereby the non-nitrogenous matters present also undergo decomposition. The chief products of this decomposition are **ammonia**, and either **carbonic acid**, or some one or more of the **organic acids**, such as the **ulmic acid** or **humic acid**. The ammonia is formed from the nitrogenous matters in the manure, and the non-nitrogenous matters may yield either carbonic acid or the organic acids we have named above, according to the manner in which the decomposition of the manure takes place. If the manure be allowed to get dry and hot, then carbonic acid is formed; but if the manure be kept moist, one of the organic acids is produced. If **carbonic acid** be formed, it combines with **ammonia**, and we have **carbonate of ammonia** formed. This is a very volatile and pungent smelling salt, of which you will have very little doubt after you have once experienced its influence. But if instead of carbonic acid being formed, we get one or more of the organic acids produced, then you have, say, **ulmate of ammonia** or **humate of ammonia** formed, which has a very different character. You have probably seen the **black streams** which